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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/603,443	06/25/2003	Robert G. Combs	RAP-1	4374

20808 7590 05/03/2011

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EXAMINER	
JONES, HEATHER RAE	

ART UNIT	PAPER NUMBER
2481	

NOTIFICATION DATE	DELIVERY MODE
05/03/2011	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/603,443	COMBS, ROBERT G.	
	Examiner	Art Unit	
	HEATHER R. JONES	2481	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 February 2011*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6 and 15-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6 and 15-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *25 June 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 15, 2011 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 1-6 and 15-28 have been considered but are moot in view of the new ground(s) of rejection. Furthermore, regarding the challenge to the Official Notice taken in the previous Office Action regarding claims 22 and 23, a reference has been provided, which is explained below in the rejection of claims 22 and 23.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1, 3-6, 15-21, and 24-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Laird et al. (6,647,361) in view of Moran et al. (U.S. Patent 6,332,147) in view of Monroe (U.S. Patent 6,970,183).

Regarding claim **1**, Laird et al. discloses a testing system (field office (82) comprising: a) a digital signal capture card for sensing and collecting discrete digital signals as digital data (Figs. 28 and 29 – memory fields 765, 767, and 803; col. 23, lines 62-64; col. 24, lines 3-5; col. 25, lines 16-17 – these memory fields indicate whether the car is a violator or non-violator and the current traffic light phase); b) a multi-port serial port expansion card for sensing and collecting digital communication messages as serial data (Figs. 28 and 29; col. 23, line 46 – col. 25, line 6 – speeds and times are all collected and stored; the subsystems can be seen in Fig. 5); c) a video frame grabber and compression card for sensing and collecting video signals as video data (Figs. 28, 29, and 32); d) a device for indexing and storing the digital data, serial data, and video data with time tags (Figs. 28 and 29; the time tag can be seen in Fig. 32 in the section designated by reference character “820”), wherein said time tags are used for relating occurrence of a particular item of a particular data type, whether digital data, serial data, or video data, to the most closely time-related data item from the other data types (Figs. 28, 29, and 32 – all data is stored accordingly and displayed together for review); and e) a display for control of the testing system and presentation of said digital data, serial data, and video data to a user during review (Fig. 32; col. 26, line 65 – col. 28, line 32); wherein the digital data and

serial data are generated by an automated system (roadside station (80)) separate from and operatively independent of the testing system (field office (82)), the automated system (roadside station (80)) comprising a plurality of subsystems (subsystems (100-108)) comprising an automated controller (CPU (90)) and at least one peripheral sensor (cameras (84a-84d) and light control box (86)) under the direction of the automated controller (CPU 90)), wherein the testing system collects the digital data and serial data from the automated system (CPU (90)) (Figs. 28 and 29 – memory fields 765, 767, and 803; col. 23, lines 62-64; col. 24, lines 3-5; col. 25, lines 16-17 – these memory fields indicate whether the car is a violator or non-violator and the current traffic light phase); wherein the digital data, serial data, and video data are related to events occurring under the influence of the automated system Figs. 28 and 29 – memory fields 765, 767, and 803; col. 23, lines 62-64; col. 24, lines 3-5; col. 25, lines 16-17 – these memory fields indicate whether the car is a violator or non-violator and the current traffic light phase – the event being a violation of the traffic light); wherein the testing system stores and facilitates review of the digital data, serial data, and video data (Fig. 32; col. 26, line 65 – col. 28, line 32). However, Laird et al. fails to disclose the display displays each data type, whether digital data, serial data, or video data, in a time-synchronized manner in the separate windows based on the time tags and wherein the testing system is used to determine whether the automated system functioned properly during a recorded event by review of the compiled data.

Referring to the Moran et al. reference, Moran et al. discloses a system for collecting, storing, and reviewing related digital data, serial data, and video wherein the presentation of said digital data, serial data, and video data is separate windows on the display to a user during review; and wherein the display displays each data type, whether digital data, serial data, or video data, in a time-synchronized manner in the separate windows based on the time tags (Fig. 4; col. 19; lines 1-65).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the digital data, serial data, and video data in separate windows on the display during review as well as being time-synchronized as disclosed by Moran et al. in the system disclosed by Laird et al. in order to have provided the user with a simple interface that displays all linked material to the user at once. However, Laird et al. in view of Moran et al. still fail to disclose the testing system is used to determine whether the automated system functioned properly during a recorded event by review of the compiled data.

Referring to the Monroe reference, Monroe discloses a test system wherein the testing system is used to determine whether the automated system functioned properly during a recorded event by review of the compiled data (col. 18, lines 23-31).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the testing system to determine

whether the automated system functioned properly during a recorded event by review of the data as disclosed by Monroe in the system disclosed by Laird et al. in view of Moran et al. in order to ensure the system is functioning properly so false violations are not being recorded and so that violations are being captured.

Regarding claim **3**, Laird et al. in view of Moran et al. in view of Monroe discloses all the limitations as previously discussed with respect to claim 1 including that the reviewed video data are presented in picture format of still image or time-motion video images on the display during review (Laird et al.: Fig. 32).

Regarding claim **4**, Laird et al. in view of Moran et al. in view of Monroe discloses all the limitations as previously discussed with respect to claim 1 including that the reviewed serial communication data are presented in time-ordered message sequence (Laird et al.: Fig. 32 – details window (820) on the display during review; col. 27, lines 41-52).

Regarding claim **5**, Laird et al. in view of Moran et al. in view of Monroe discloses all the limitations as previously discussed with respect to claim 1, including that the reviewed serial communication data are presented as recorded in hexadecimal or ASCII format during review (Laird et al.: Fig. 32 displays ASCII characters).

Regarding claim **6**, Laird et al. in view of Moran et al. in view of Monroe discloses all the limitations as previously discussed with respect to claim 1 including that the reviewed serial communication data are translated according to

message parsing rules during review (Laird et al.: Fig. 32 displays the time and information in the correct format – parsing is the process of analyzing a sequence of tokens (codes) to determine its grammatical structure with respect to a given formal grammar).

Regarding claim **15**, Laird et al. discloses a method of testing and evaluating an automated system, the method comprising the steps of: a) operatively interconnecting a testing system to the automated system (Fig. 5); b) collecting discrete digital signals generated by the automated system during operation of the automated system as digital data using the testing system (Figs. 28 and 29 – memory fields 765, 767, and 803; col. 23, lines 62-64; col. 24, lines 3-5; and col. 25, lines 16-17 - these memory fields indicate whether the car is a violator or non-violator and the current traffic light phase), wherein the automated system comprises a plurality of subsystems (subsystems (100-108)) comprising an automated controller (CPU (90)) and at least one peripheral sensor (cameras (84a-84d) and light control box (86)); c) monitoring for serial digital communication messages between the subsystems generated by the automate system during operation of the automated system using the testing system and collecting the serial communication messages as serial data using the testing system (Figs. 28 and 29; col. 23, line 46-col. 25, line 6 - speeds and times are collected and stored; the subsystem can be seen in Fig. 5); d) collecting video images of the automated system during operation of the automated system as video data using the testing system, wherein the digital data, serial data, and

video data are related to events occurring under the influence of the automated system (Figs. 28, 29, and 32); e) indexing said digital data, serial data, and video data with time tags using the test system (Figs. 28 and 29); f) recording said digital data, serial data, and video data in the testing system; and g) displaying said digital data, serial data, and video data on a single display in a time-synchronized manner based on time tags using the testing system (Figs. 28, 29, and 32 – all data is stored accordingly and displayed together for review); wherein the testing system stores and facilitates review of the digital data, serial data, and video data (Fig. 32; col. 26, line 65 – col. 28, line 32). However, Laird et al. fails to disclose displaying said digital data, serial data, and video data in separate windows on a single display in a time- synchronized manner based on time tags and wherein the testing system is used to determine whether the automated system functioned properly during a recorded event by review of the compiled data; and wherein the automated system is operable independently of the testing system.

Referring to the Moran et al. reference, Moran et al. discloses a method for collecting, storing, and reviewing related digital data, serial data, and video wherein the presentation of said digital data, serial data, and video data is separate windows on the display to a user during review; and wherein the display displays each data type, whether digital data, serial data, or video data, in a time-synchronized manner in the separate windows based on the time tags (Fig. 4; col. 19; lines 1-65).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the digital data, serial data, and video data in separate windows on the display during review as well as being time-synchronized as disclosed by Moran et al. in the method disclosed by Laird et al. in order to have provided the user with a simple interface that displays all linked material to the user at once. However, Laird et al. in view of Moran et al. still fail to disclose the testing system is used to determine whether the automated system functioned properly during a recorded event by review of the compiled data; and wherein the automated system is operable independently of the testing system.

Referring to the Monroe reference, Monroe discloses a test system wherein the testing system is used to determine whether the automated system functioned properly during a recorded event by review of the compiled data (col. 18, lines 23-31); and wherein the automated system is operable independently of the testing system (col. 18, lines 23-27 – the master server only monitors the functions of the automated system that is operating separately from the server, but just sends information back to the master server).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the testing system to determine whether the automated system functioned properly during a recorded event by review of the data as disclosed by Monroe in the method disclosed by Laird et al.

in view of Moran et al. in order to ensure the system is functioning properly so false violations are not being recorded and so that violations are being captured.

Regarding claim **16**, Laird et al. in view of Moran et al. in view of Monroe discloses all the limitations as previously discussed with respect to claim 15 including that wherein step d) comprises the sub-step of storing said digital data, serial data, and video data on a computer hard drive (Laird et al.: col. 30, lines 22-39 – hard drive).

Regarding claim **17**, Laird et al. in view of Moran et al. in view of Monroe discloses all the limitations as previously discussed with respect to claim 15 as well as the method further comprising the step of searching said digital data, serial data, and video data for a particular event, a sequence of events, or a combination of events (Laird et al.: Fig. 32 - the person reviews the information (searches the information) to see if the cars were in violation of the traffic light).

Regarding claim **18**, Laird et al. in view of Moran et al. in view of Monroe discloses all the limitations as previously discussed with respect to claim 15 including that steps a), b), and c) occur simultaneously over a common time period (Laird et al.: Fig. 32 – all information is combined based on their time for the viewer to get an overall sense of what happened).

Regarding claim **20**, Laird et al. in view of Moran et al. in view of Monroe discloses all the limitations as previously discussed with respect to claim 15 including that wherein step b) comprises the substep of monitoring with the testing system for discrete digital signals of the peripheral sensor in parallel

without affecting the automated system and collecting the discrete digital signals (Laird et al.: Figs. 4 and 32; col. 26, line 65 – col. 28, line 32; Moran et al.: Fig. 4; col. 19; lines 1-65).

Regarding claim **21**, Laird et al. in view of Moran et al. in view of Monroe discloses all the limitations as previously discussed with respect to claim 15 including that the method further comprises the step of automatically slewing the remaining two data types to a display time selected by a user for any individual data type, whether digital data, serial data, or video data, wherein said digital data, serial data, and video data are displayed in separate windows (Moran et al.: Fig. 4; col. 19; lines 1-65).

Regarding claim **24**, Laird et al. in view of Moran et al. in view of Monroe discloses all the limitations as previously discussed with respect to claim 1 including that when the user selects a display time of one of the individual data type, whether digital data, serial data, or video data, the remaining two data types are automatically slewed to the display time, wherein said digital data, serial data, and video data are displayed in separate windows (Moran et al.: Fig. 4; col. 19; lines 1-65).

Regarding claim **25**, Laird et al. in view of Moran et al. in view of Monroe discloses all the limitations as previously discussed with respect to claim 1 including that the testing system monitors for the discrete digital signals of the automated system in parallel without affecting the automated system (Laird et al.:

Figs. 4 and 32; col. 26, line 65 – col. 28, line 32; Moran et al.: Fig. 4; col. 19; lines 1-65).

Regarding claim **26**, Laird et al. in view of Moran et al. in view of Monroe discloses all the limitations as previously discussed with respect to claim 1 including that the testing system accommodates various data modes of the digital data and the serial data in their original format to and from the automated system without modification of the automated system (Laird et al.: Figs. 4 and 32; col. 26, line 65 – col. 28, line 32; Moran et al.: Fig. 4; col. 19; lines 1-65).

Regarding claim **27**, Laird et al. in view of Moran et al. in view of Monroe discloses all the limitations as previously discussed with respect to claim 1 including that the testing system monitors an original signal of the digital data in parallel without affecting the automated system (Laird et al.: Figs. 4 and 32; col. 26, line 65 – col. 28, line 32; Moran et al.: Fig. 4; col. 19; lines 1-65).

5. Claims 2 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Laird et al. in view of Moran et al. in view of Monroe as applied to claims 1 and 15 above, and further in view of Auty et al. (U.S. Patent 5,809,161).

Regarding claim **2**, Laird et al. in view of Moran et al. in view of Monroe discloses all the limitations as previously discussed with respect to claim 1, but fails to disclose that the reviewed discrete digital data are presented in graphical strip chart format on the display during review.

Referring to the Auty et al. reference, Auty et al. discloses reviewing traffic information wherein the reviewed discrete digital data are presented in graphical strip chart format on the display during review (Fig. 16).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have graphically shown digital data as taught by Auty et al. in the system as disclosed by Laird et al. in view of Moran et al. in view of Monroe in order to allow the reviewer to easily correlate related data visually.

Regarding claim **19**, Laird et al. in view of Moran et al. in view of Monroe discloses all the limitations as previously discussed with respect to claim 15, but fails to explicitly disclose that the method further comprises the step of providing a status feedback to a system operator, wherein the status feedback comprises a duration of recording, a current state of said digital data, serial data, and video data, and a total number of state changes of said digital data, serial data, and video data.

Referring to the Auty et al. reference, Auty et al. discloses reviewing traffic information wherein the reviewed discrete digital data are presented in graphical strip chart format on the display during review which would provide the user with status feedback, wherein the status feedback comprises a duration of recording, a current state of said digital data, serial data, and video data, and a total number of state changes of said digital data, serial data, and video data (Fig. 16).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included status feedbacks to the user as disclosed by Auty et al. in the system as disclosed by Laird et al. in view of Moran et al. in view of Monroe in order to allow the reviewer to easily correlate related data visually.

6. Claims 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Laird et al. in view of Moran et al. in view of Monroe as applied to claim 15 above, and further in view of Ciolli et al. (U.S. Patent 6,546,119).

Regarding claim **22**, Laird et al. in view of Moran et al. in view of Monroe discloses all the limitations as previously discussed with respect to claim 15, but fails to disclose that the method further comprises the step of regenerating the discrete digital signals from the digital data and supplying the discrete digital signals as inputs to the automated system in a format and a timing of an original sequence of events to simulate the original sequence of events.

Referring to the Ciolli et al. reference, Ciolli et al. discloses a testing method that includes the step of generating the discrete digital signals from the digital data and supplying the discrete digital signals as inputs to the automated system in a format and a timing of an original sequence of events to simulate the original sequence of events (col. 22, lines 25-56 – the method involves "sampling" using different scenarios, which is part of fine tuning the system with different parameters in order to evaluate the results to ensure the system is functioning properly).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the inputted data representing different scenarios into the automated system to evaluate the results disclosed by Ciolli et al. in the method disclosed by Laird et al. in view of Moran et al. in view of Monroe in order to further evaluate the new results in order for the user to ensure there was a violation and properly issue the citation. Furthermore, since Ciolli et al. discloses inputting data into the automated system then one could regenerate the data from an earlier violation to ensure a proper citation is issued.

Regarding claim **23**, Laird et al. in view of Moran et al. in view of Monroe in view of Ciolli et al. discloses all the limitations as previously discussed with respect to claims 15 and 22 including that the method further comprising the step of evaluating a response by the automated system to the inputs (col. 22, lines 25-56 – the method involves "sampling" using different scenarios, which is part of fine tuning the system with different parameters in order to evaluate the results to ensure the system is functioning properly).

7. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Laird et al. (6,647,361) in view of Monroe (U.S. Patent 6,970,183).

Regarding claim **28**, Laird et al. discloses a method of facilitating testing, audit, and study of the operation of an automated system, the method comprising the steps of: a) monitoring and collecting signals and data elements being received and generated by the automated system (Figs. 28 and 29 – memory fields 765, 767, and 803; col. 23, lines 62-64; col. 24, lines 3-5; and col. 25, lines

16-17 - these memory fields indicate whether the car is a violator or non-violator and the current traffic light phase); b) monitoring and collecting signals and data elements being exchanged by components and subsystems of the automated system (Figs. 28 and 29; col. 23, line 46-col. 25, line 6 - speeds and times are collected and stored; the subsystem can be seen in Fig. 5); c) collecting video data of the operation of the automated (Figs. 28, 29, and 32); d) presenting collected signals, data elements, and video data during a review process in a manner relating the monitored signals and data elements to the physical events occurring when the signals and messages were transmitted (Figs. 28, 29, and 32 – all data is stored accordingly and displayed together for review); wherein the testing system stores and facilitates review of the digital data, serial data, and video data (Fig. 32; col. 26, line 65 – col. 28, line 32). However, Laird et al. fails to disclose the testing system is used to determine whether the automated system functioned properly during a recorded event by review of the compiled data; and wherein the automated system is operable independently of the testing system.

Referring to the Monroe reference, Monroe discloses a test system wherein the testing system is used to determine whether the automated system functioned properly during a recorded event by review of the compiled data (col. 18, lines 23-31); and wherein the automated system is operable independently of the testing system (col. 18, lines 23-27 – the master server only monitors the

functions of the automated system that is operating separately from the server, but just sends information back to the master server).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the testing system to determine whether the automated system functioned properly during a recorded event by review of the data as disclosed by Monroe in the method disclosed by Laird et al. in view of Moran et al. in order to ensure the system is functioning properly so false violations are not being recorded and so that violations are being captured.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HEATHER R. JONES whose telephone number is (571)272-7368. The examiner can normally be reached on Mon. - Thurs.: 7:00 am - 4:30 pm, and every other Fri.: 7:00 am - 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter-Anthony Pappas can be reached on 571-272-7646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Heather R Jones
Examiner
Art Unit 2481

HRJ
April 23, 2011

/Peter-Anthony Pappas/
Supervisory Patent Examiner, Art Unit 2481